

WHAT IS CLAIMED IS:

1. A system for providing index data of multimedia contents comprising:
a data server system for providing multimedia data to subscribers;
an index server system for receiving streams transferred from the data server
5 system to subscribers, extracting index data from the received streams, and providing
the extracted index data to subscribers; and
a subscriber equipment for real time recording and playing the multimedia data
from the data server system and providing a user interface to perform non-linear search
and browsing using the index data provided from the index server system.
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2. The system of claim 1, wherein the index data extracted from the index
server system are structural, semantic or summary data of the multimedia streams
described based on temporal data.
- 15 3. The system of claim 2, wherein the structural data of the multimedia streams
include shot or scene data described based on temporal data.
4. The system of claim 2, wherein the semantic data of the multimedia streams
include information on appearance or disappearance of objects, transition of background,
20 occurrence and termination of event, semantic data of each section within the streams,
and state of the object, wherein those information are described based on temporal data.
5. The system of claim 2, wherein the summary data of the multimedia streams
include key frame or highlight data, or segment data related to summary/detail

relationship or cause/result relationship between segments or between events, wherein such data are described based on temporal data.

6. The system of claim 1, wherein the index server system includes at least one
5 indexing engine having a program therein for automatically extracting the index data
and an interface means for manually or semi-automatically extracting the index data by
an operator.

7. The system of claim 1, wherein the index server system includes a
10 transmitting means for transmitting the index data to the subscriber equipment.

8. The system of claim 1, wherein the index server system further includes an
encoder that encodes the index data to provide only permitted users with the index data,
and wherein the subscriber equipment includes a decoder that decodes the index data
15 received from the index server system.

9. The system of claim 1, wherein the subscriber equipment includes a
communication interface means for logging on the index server system through an
access means and a program module for receiving the index data by accessing to the
20 index server system, and wherein the index server system includes a communication
interface means for providing the index data through an access means and a program
module for providing the index data requested by the subscriber equipment.

10. A method for providing index data of multimedia contents to subscribers,

comprising:

receiving multimedia streams from a data server system of a multimedia contents provider;

extracting the index data of the multimedia streams provided from the data
5 server system of the multimedia contents provider; and

providing the index data extracted from the index server system to subscriber equipments.

11. The method of claim 10, wherein the step of extracting the index data is
10 automatically performed using an indexing engine.

12. The method of claim 10, wherein the step of extracting the index data is manually performed by an operator.

13. The method of claim 10, wherein the step of extracting the index data is
15 semi-automatically performed by combining an automatic extracting system based on an indexing engine and a manual extracting system by an operator.

14. The method of claim 10, wherein the index data provided to the subscriber
20 equipments are multiplexed index data of streams provided from various multimedia contents providers.

15. The method of claim 10, wherein the step of providing the index data further includes encoding of the index data.

16. The method of claim 10, wherein the index data are extracted in real time for multimedia streams provided from the data server system of the multimedia contents provider to the subscriber equipment.

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17. The method of claim 10, wherein the index sever system stores the multimedia streams provided from the data server system of the multimedia contents provider to the subscriber equipment, and extracts the index data by indexing the multimedia streams when the index data are provided to the subscriber equipment.

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18. The method of claim 10, wherein the data server system of the multimedia contents provider provides the multimedia streams to the index server system before providing them to the subscriber equipment, and the index server system extracts the index data for the multimedia streams provided in advance and provides the extracted index data to the subscriber equipment before broadcasting time or at the broadcasting time.

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19. The method of claim 10, wherein the extracted index data are provided to the subscriber equipment in a predetermined time.

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20. The method of claim 10, wherein, upon request of subscriber equipment accessed to the index sever system, only the subscriber-desired index data are provided to the subscriber equipment at the time the subscriber requested.